



Sony Ericsson Xperia X10 Mini E10i Teardown

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INTRODUCTION

In the midst of the iPhone 4 craze, we became impatient and decided we needed to tear down a phone, you know, just to keep us in tip-top shape. And lo-and-behold, the Sony Ericsson Xperia X10 Mini E10i.

A big thanks to Brian at [EDN](#) for providing the phone for this teardown. Be sure to check out his [Xperia X10 Mini Preview!](#)



TOOLS:

- [iFixit Opening Tools](#) (1)
 - [Spudger](#) (1)
 - [T5 Torx Screwdriver](#) (1)
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Step 1 — Sony Ericsson Xperia X10 Mini E10i Teardown



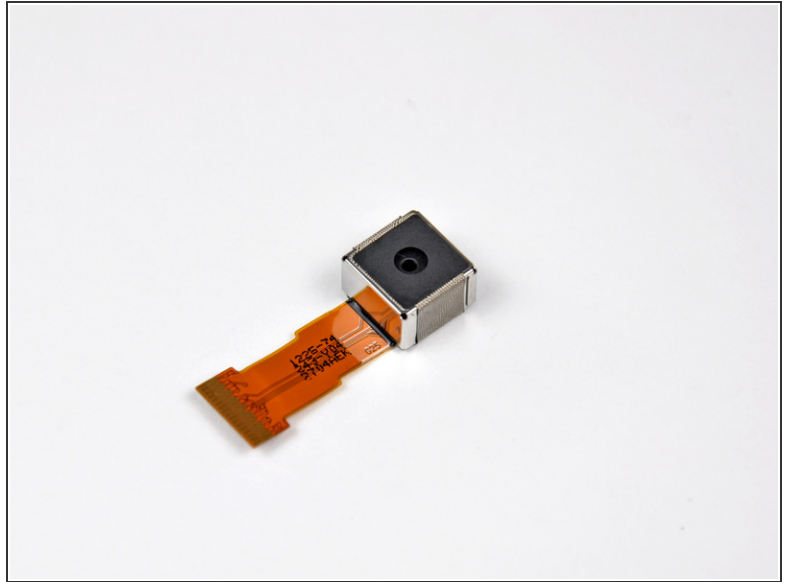
- The Sony Ericsson Xperia X10 Mini E10i is the smaller version of the Sony Ericsson Xperia X10.
- Tech Specs:
 - 600 MHz Qualcomm MSM7227
 - 256 MB RAM and 256 MB internal ROM (only 128 MB accessible)
 - 2.6" color transfective TFT display with a resolution of 240 X 320 pixels.
 - 5 Megapixel camera with autofocus
 - 802.11 b/g Wireless + Bluetooth 2.1
- The backside of the X10 Mini E10i is characterized by a smooth plastic rear case with openings for the camera, LED flash, and speaker.

Step 2



- The controls of the X10 Mini E10i are pretty standard.
- The bottom of the X10 Mini E10i integrates a 3.5 mm headphone jack as well as a micro-USB port.
- The top edge houses the power button.
- The left side accommodates the volume and camera buttons, leaving the right side blank and featureless.

Step 3



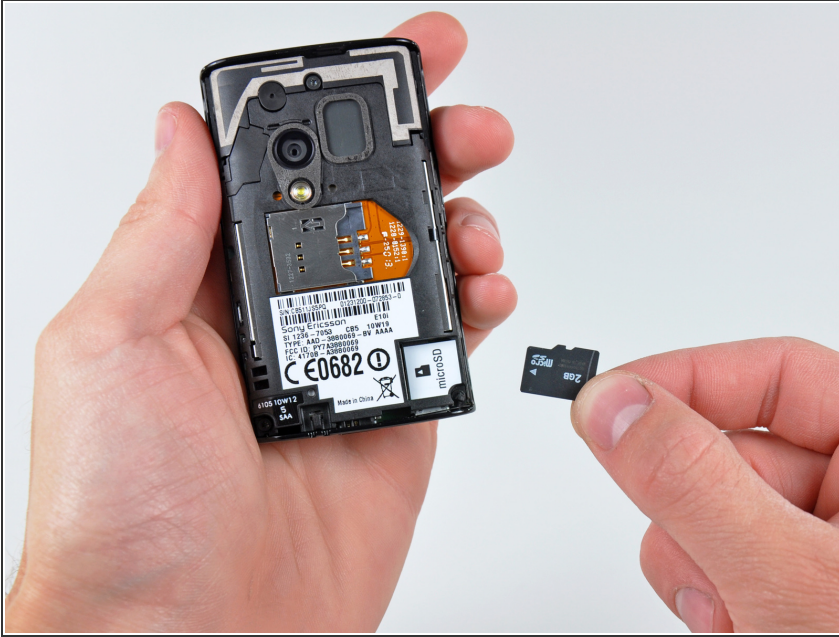
- The 5.0 megapixel camera in the X10 Mini E10i features a 1X optical zoom with autofocus and a built-in LED flash.
- The camera itself measures in at 8.8 x 9.1 x 6 mm.

Step 4



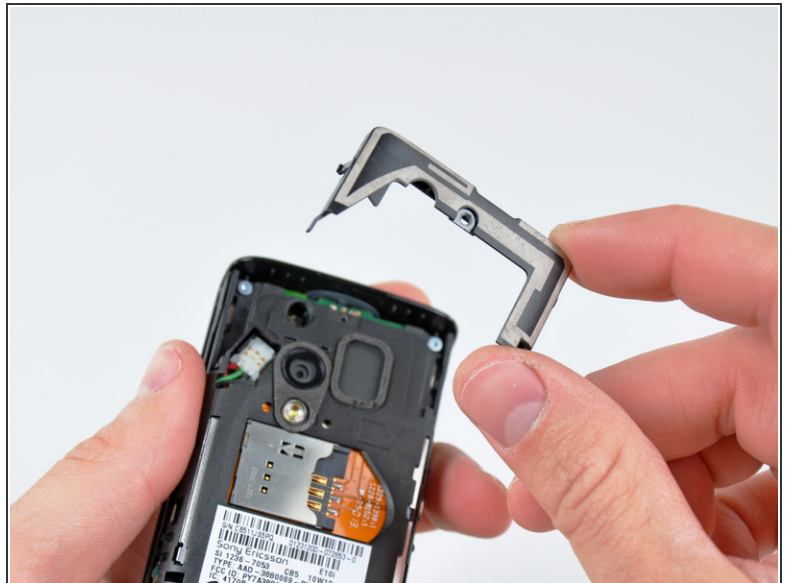
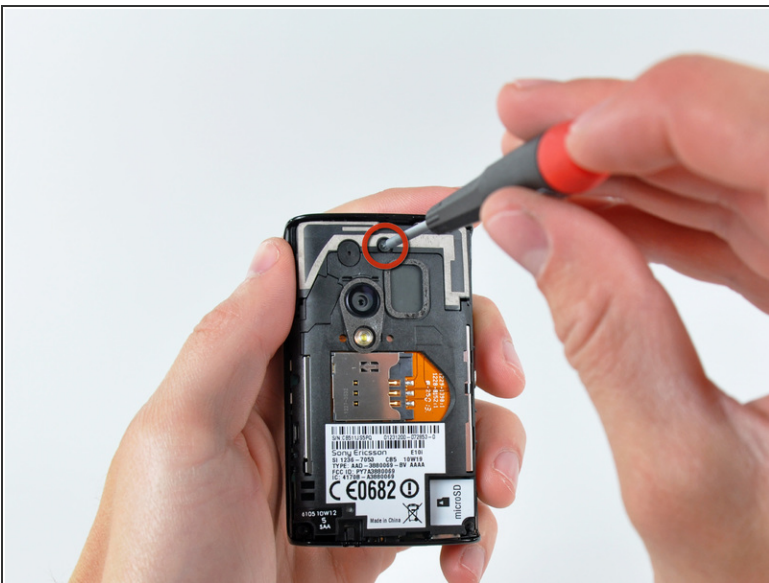
- A few quick pries with an iPod opening tool around the perimeter of the X10 Mini E10i and the rear case easily pops off to access the phone's innards.
- ❗ The actual electronic volume and camera buttons are attached directly to the logic board. The buttons you press on the outer case are just chrome covers.

Step 5



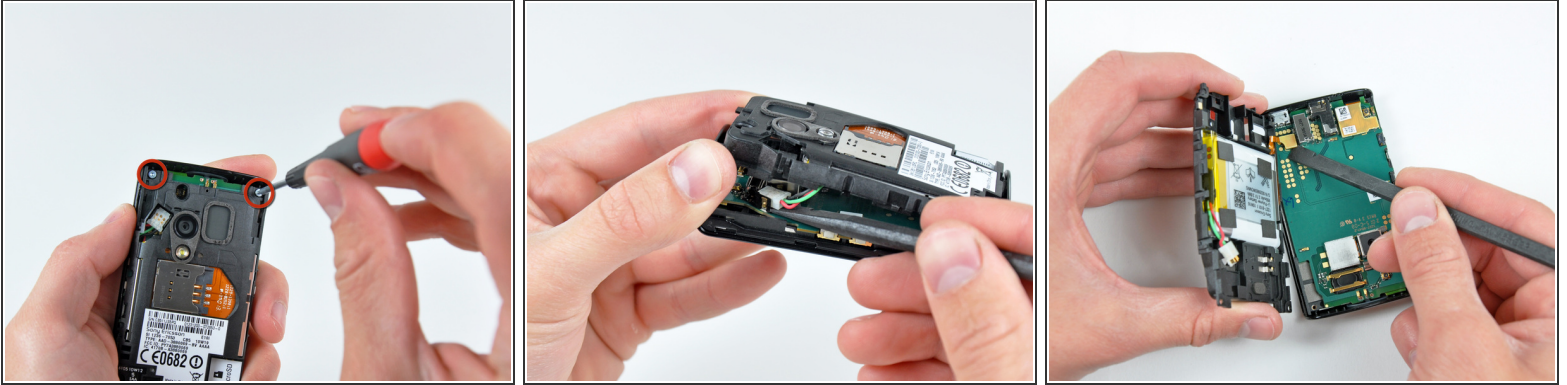
- A thumbnail is all that is needed to remove the microSD card from its housing in the inner case.
- The simple design of the Mini E10 allows most components to plug directly into the logic board. The only exception is the external microSD card slot.

Step 6



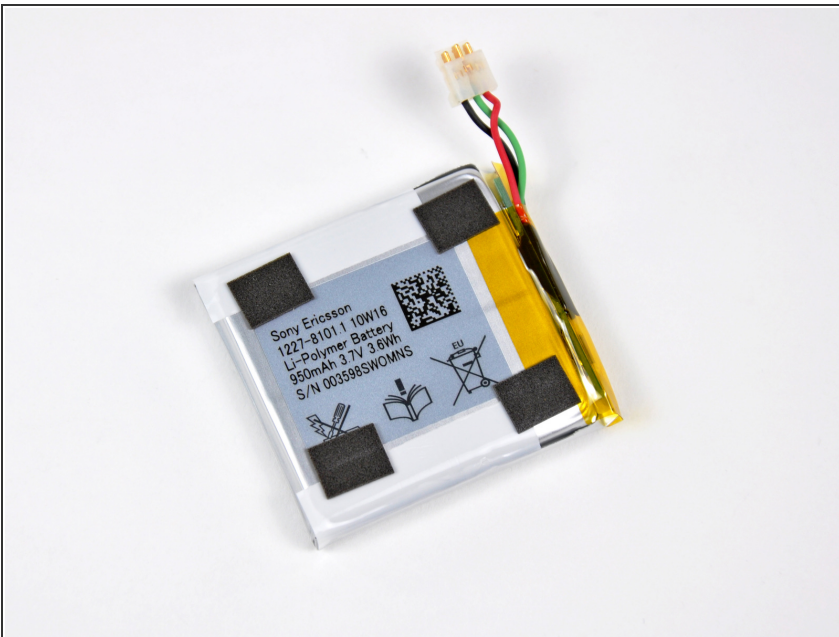
- A single T5 Torx screw and a few plastic clips are all that secure the antenna assembly to the inner case.
- ① The antenna assembly uses simple yet effective pressure contacts to make a connection with the logic board. No connectors necessary!

Step 7



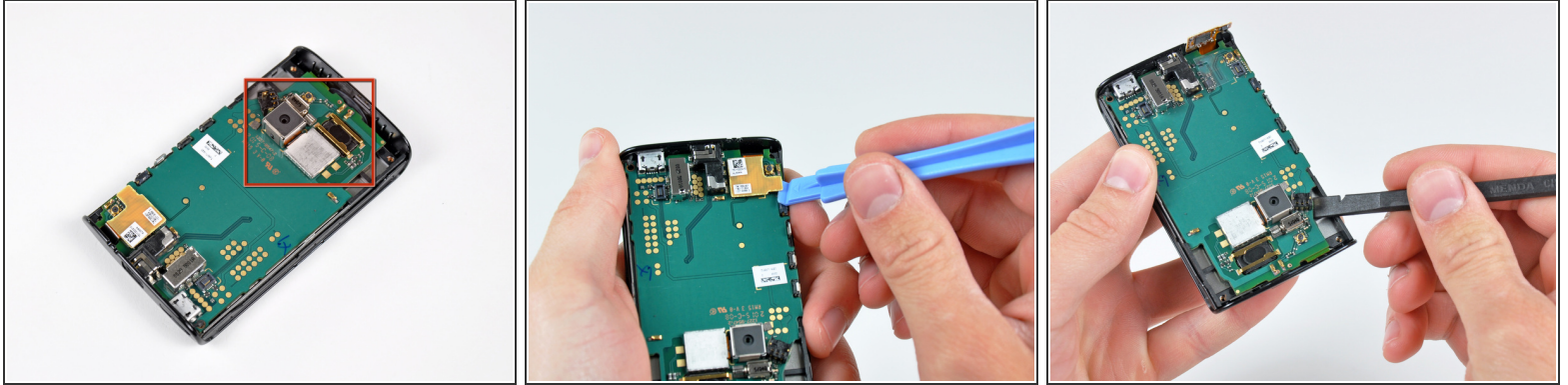
- A couple more T5 Torx screws secure the rear inner case and logic board to the rest of the X10 Mini E10i.
- Disconnect the battery connector from the logic board with the flat end of a spudger.
- Pry up the SIM card socket connector and remove the rear inner case from the the logic board.

Step 8



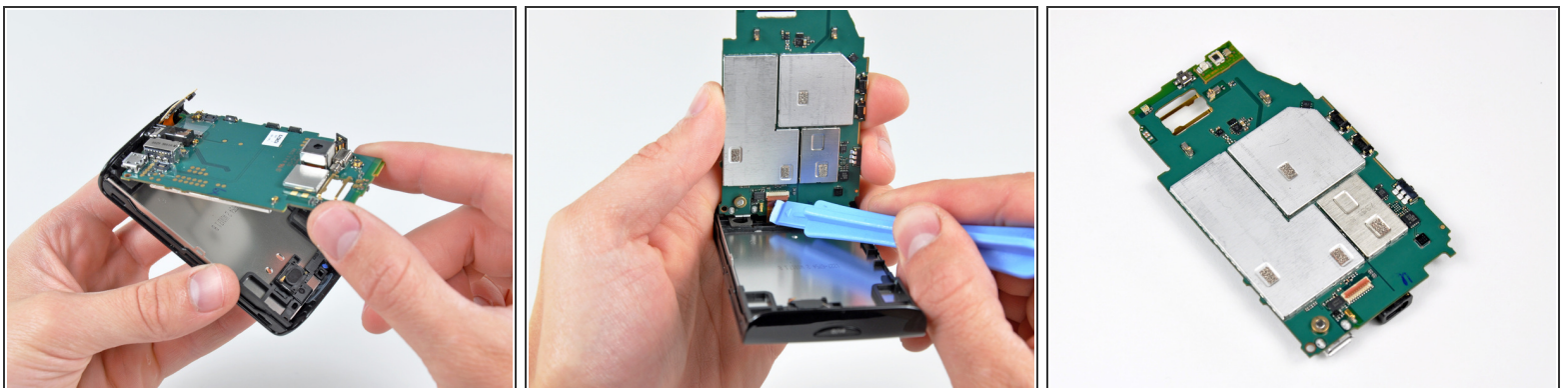
- The 3.7V 950 mAh Li-Polymer battery allows for 4 hours of talk time.
- Measuring 40 x 35 x 5.5 mm and weighing in at a scant 18 grams, the X10 Mini E10i's battery provides up to 360 hours of 3G standby time.
- ⓘ The batteries of both the [iPhone 3GS](#) and the X10 Mini E10i have capacities of about 53 mAh per gram.

Step 9



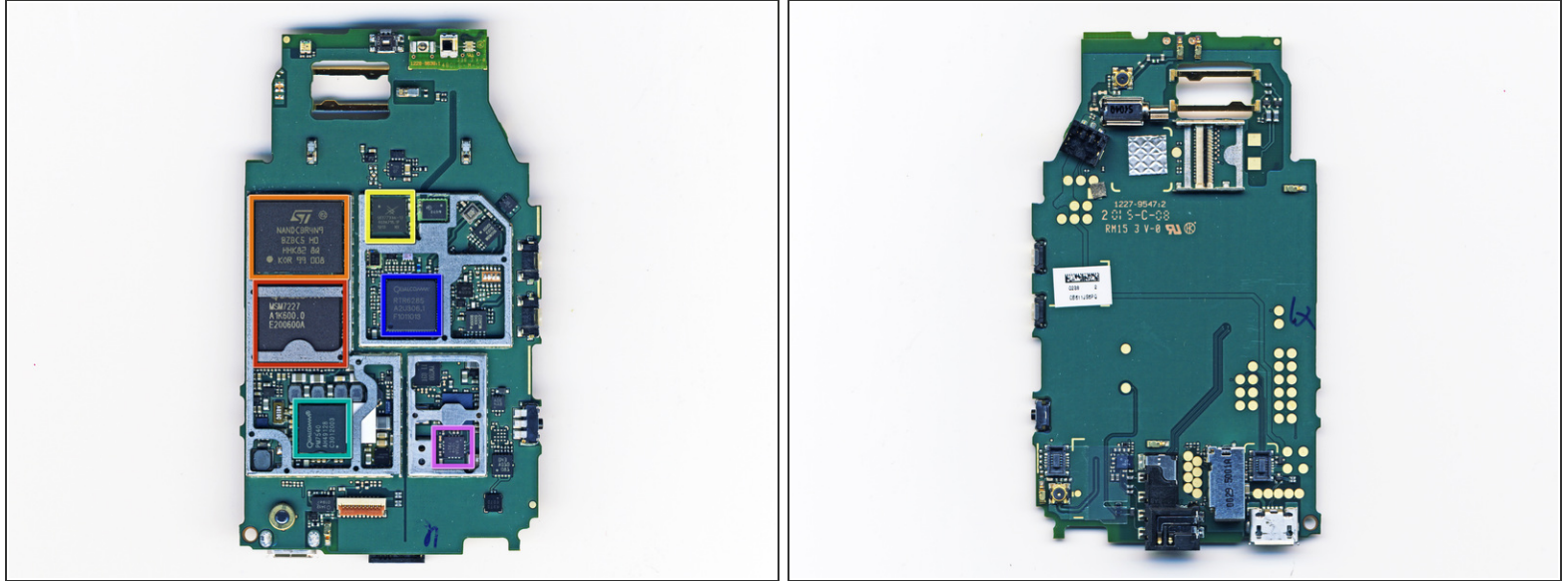
- The 5 MP camera, battery connector, vibrator motor, and speaker are densely packed on the logic board near the top of the phone.
- After disconnecting the touchscreen connector, the logic board can be carefully pried out of its enclosure.

Step 10



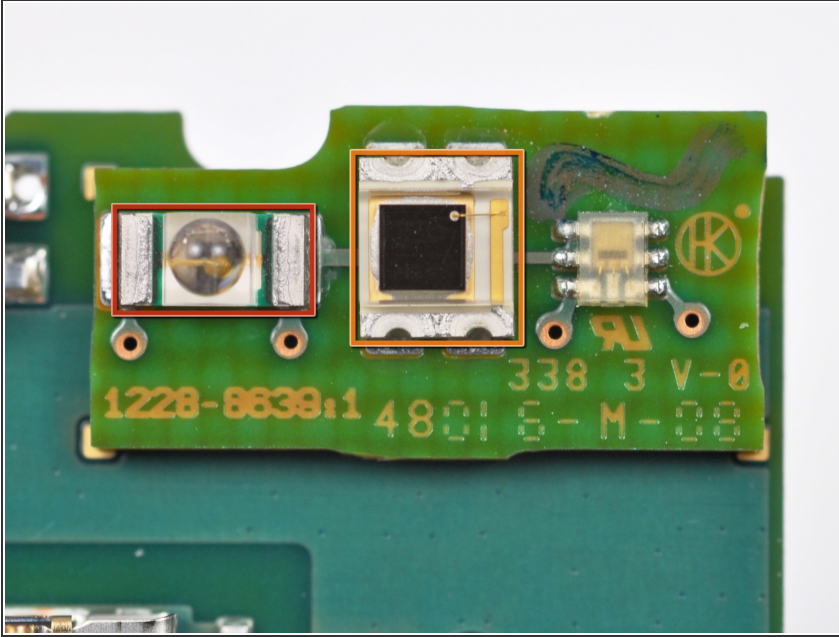
- Rotate the logic board upward out of its cradle and use an iPod opening tool to disconnect the display data ribbon cable.
- ⓘ The shields covering the majority of the chips housed on the logic board protect their sensitive circuitry from electromagnetic interference.

Step 11



- Big players on the board include:
 - A Qualcomm MSM7227 with 600 MHz application processing, 400 MHz modem processing, hardware accelerated 3D graphics, integrated Bluetooth 2.1 & GPS capabilities, and image/video encoding & decoding.
 - STMicroelectronics NANDCBR4N9
 - Skyworks SKY77336 GSM power amplifier module
 - Qualcomm PM7540 power management IC
 - Qualcomm RTR6285 UMTS RF transceiver with receive diversity and GPS
 - TriQuint TQM679002A WLAN Power Amplifier

Step 12



- Sensors near the top of the board face outward from the front of the phone near the earphone opening.
- A proximity sensor turns off the touch screen when the phone is against your face.
- A light sensor automatically adjusts the LCD brightness for optimal viewing in any lighting condition.

Step 13



- Further prying around the perimeter of the front panel assembly allows the LCD assembly to be separated from the front panel.

Step 14



- The digitizer is manufactured by Synaptics, with the main touch screen controller labeled as T1021A 1 0942 AC0P876.
- ❗ Interestingly enough, this is similar to the digitizer found in [Microsoft's Kin Two](#).
- A Samsung LMS255GF02 takes care of the Mini E10i's display needs.

Step 15



- And just like that, the dark deed has been done.
- Thanks, Sony, for keeping it simple.
- For more information on this little guy, check out EDN's [Xperia X10 Mini Preview](#).
- Keep an eye on our [Teardown](#) page for the arrival of the highly anticipated iPhone 4.

To reassemble your device, follow these instructions in reverse order.

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